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1962/8

REPORT OF THE

FOURTH MEETING OF THE PLANT PROTECTION COMMITTEE FOR THE SOUTHEAST ASIA AND PACIFIC REGION

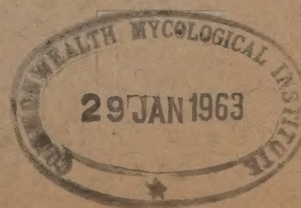
Held in Manila, Philippines
June 1962

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FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

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Beginning in January 1955, reports of FAO meetings, held as part of the Program of Work of the then Agriculture Division, were issued in the present form and numbered chronologically within each calendar year.

Since the establishment of the Plant Production and Protection Division in January 1959 the serial annual chronological numbers refer to reports issued by this Division.

Reports of previous meetings of the Plant Protection Committee for the South East Asia and Pacific Region were issued as follows:

First Meeting	Bangkok, Thailand	3- 7 December 1956
Second Meeting	Kandy, Ceylon	2- 7 December 1957
Third Meeting	New Delhi, India	7-12 December 1959

REPORT OF THE FOURTH MEETING
OF
THE PLANT PROTECTION COMMITTEE
FOR THE SOUTH EAST ASIA AND PACIFIC REGION

Held in
Manila, The Philippines
from
11 to 19 June 1962

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS
Rome, Italy August, 1962

CONTENTS

	Page
INTRODUCTION.....	1
PARTICIPATION.....	3
PRESENT STATUS OF THE PLANT PROTECTION AGREEMENT.....	8
PLANT QUARANTINE ACTIVITIES OF GOVERNMENTS.....	9
REPORT OF THE STANDING TECHNICAL SUB-COMMITTEE.....	13
GEOGRAPHIC COVERAGE OF THE AGREEMENT.....	14
MEASURES FOR REGULATING IMPORTATION AND MOVEMENT OF PLANTS.....	15
SPECIAL PLANT QUARANTINE PROBLEMS.....	19
Packing Materials of Plant Origin.....	19
Measures for Preventing the Spread of Plant Parasitic Nematodes.....	19
Plant Quarantine and the Exchange of Beneficial Insects.....	20
Post-Entry Quarantine.....	21
Measures for Preventing the Introduction of Pests and Diseases on Plant Materials in Transit.....	21
Weeds.....	22
PUBLICITY AND THE EDUCATION OF TRAVELLERS.....	23
PROGRAM OF THE COMMITTEE.....	24
GENERAL RECOMMENDATIONS.....	26

INTRODUCTION

The Plant Protection Committee for the South East Asia and Pacific Region was established in pursuance of the regional Plant Protection Agreement, which was approved by the Twenty-third Session of the FAO Council on 26 November 1955. The Agreement came into force on 2 July 1956 and the Committee, consisting of representatives of participating governments, met for the first time in December 1956.

The Fourth Meeting of the Committee was held, through the courtesy of the Government of the Philippines, in Manila from 11 to 19 June 1962. The meeting was attended by representatives of eight participating governments, as well as by observers from three other countries and from the South Pacific Commission. Nine general sessions and three sub-committee sessions were held. Excursions were arranged by the Bureau of Plant Industry of the Department of Agriculture of the Philippines to Guinobatan Experiment Station in the Bicol area, where cadang-cadang disease of coconuts is under intensive investigation, and to the Plant Quarantine Station in the Manila port area. Immediately after the meeting, participants were given the opportunity of visiting the College of Agriculture of the University of the Philippines, the International Rice Research Institute, the laboratories of the Bureau of Plant Industry and the Forest Product, Research Institute. Also, in a two-day trip, places of plant protection interest on the way to the summer capital, Baguio, were visited.

At the opening session, delegates and observers were welcomed by Mr. E. E. Cruz, Director of Plant Industry of the Philippines. He spoke of the territories represented at the Committee, which, despite their varied character, had many common problems. He outlined the varied nature of the problems with which the Committee had to deal, including the consideration of the many serious pests and diseases not yet known in the Region; the formulation of recommendations regarding the import and movement of plants to prevent the introduction and spread of dangerous pests and diseases; the implementation of the regional Plant Protection Agreement and the arrangement for intermediate quarantine. Mr. Cruz also emphasized the imperative need for full and sustained publicity on plant quarantine requirements, particularly in view of the increase in speed and volume of air transport, and the necessity for rigid implementation of plant quarantine rules and regulations.

On behalf of the Director-General of FAO, Mr. A. H. MacKenzie, Acting FAO Country Representative in the Philippines, welcomed participants and thanked the host Government for its hospitality. He then delivered a message from the Director General, pointing out the progress made by the Committee in fostering international cooperation and in coordinating national plant protection efforts. Major contributions had included the formulation of uniform quarantine procedures designed to exclude destructive pests and diseases from the Region, the provision of assistance to participating governments in certain problems and the dissemination of information on outbreaks and movements of pests and diseases. The Director-General looked forward to a successful meeting and to fruitful results arising from a joint international effort.

Dr. T. H. Harrison of Australia, speaking on behalf of delegates and observers, expressed the gratitude of all participants to the Government of the Philippines and particularly to the Director and staff of the Bureau of Plant Industry for their generous hospitality and the excellent arrangements made. He warmly welcomed the full participation of the Philippines in the work of the Committee. He emphasized that the cooperation of all governments represented was essential to the success of the work which, in improving plant quarantine efficiency throughout the Region, was directly contributing to the wellbeing of all peoples within the Region. He apologized for the absence of the retiring chairman Dr. K. B. Lal, who was now the Regional Plant Protection Specialist for FAO in the Near East. He then read a speech prepared by Dr. Lal, pointing out the increasing importance of plant quarantine due to expansion in international movement of planting material. Dr. Lal felt that plant quarantine could be regarded as an insurance against risks. As in the case of other types of insurance, even if a national quarantine service could not cover all risks, at least all possible risks could be covered.

The Honorable Mr. B. M. Gozon, Secretary of Agriculture and Natural Resources of the Philippines, was then introduced by Dr. P. S. Sales, Acting Chairman of the National FAO Committee. The Secretary, in his speech, emphasized the international and regional, as well as the national, importance of plant protection. The control of diseases and pests was particularly important in the Philippines and other countries in the Region, as a means to attaining self-sufficiency in staple food crops, such as rice and corn. Several serious outbreaks of pests and diseases had been and still were causing serious damage in the Philippines, for example rats and locusts, abaca mosaic, and cadang-cadang of coconut, rice blast and rice stem borers. It was calculated that the "untaken harvest" of rice alone amounted to over 383 million pesos every year. It was essential to prevent the entry of further pests and diseases into territories in the Region and, to ensure this, plant quarantine services were in the front line of defence. The implementation of the regional Plant Protection Agreement would help to increase crop production and so raise the standard of living of the people. As regards the Philippines, the Bureau of Plant Industry has been active in the field of plant quarantine both in safeguarding local agricultural industries and in ensuring that no pest or disease was disseminated to other countries.

Acknowledgments

FAO gratefully acknowledges the courtesy extended by the Government of the Philippines, the excellent arrangements made for the meeting and the assistance provided by many staff members of the Bureau of Plant Industry, in particular by Mr. E. E. Cruz, Director of Plant Industry and by Mr. J. L. Morales, who acted as liaison officer for the meeting.

PARTICIPATION

Delegations of Participating Governments

Australia

T. H. HARRISON

Director of Plant Quarantine
Department of Health
Canberra, A.C.T.

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Ibbagamuwa

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Chief, Plant Quarantine Section
Department of Agriculture
Bangkok

United Kingdom

T. H. WILLIAMS

Plant Pathologist
Department of Agriculture
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Tuaran, North Borneo

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United States of America

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A. JOHNSTON

Regional Plant Protection Specialist
FAO Regional Office for Asia and the
Far East
Bangkok, Thailand

Officers of the Meeting

Dr. Harrison of Australia, in the absence of the retiring Chairman, by unanimous consent took the chair at the first session. Thereafter Mr. E. E. Cruz of the Philippines was elected Chairman of the Committee, to succeed Dr. K. B. Lal of India, who had during his term of office retired from his post as Plant Protection Adviser of the Government of India. In accordance with the terms of the regional Plant Protection Agreement, Mr. Cruz will serve as Chairman for a period of two years or until the first session of the Committee held after the expiry of the period of two years.

Mr. A. Johnston of FAO served as Technical Secretary.

A Drafting Sub-Committee and two Technical Sub-Committees were set up, composed of the following members:

Drafting Sub-Committee: J. Barrau (South Pacific Commission),
Chairman; M. H. Barat (France); H. A. Custodio (Philippines);
T. H. Harrison (Australia); Kahn Jalevicharana (Thailand);
J. R. Velasco (Philippines); T. H. Williams (United Kingdom).

Sub-Committee to consider Regulatory Measures: M. H. Barat (France),
Chairman; M. F. Borja (U.S.A.); H. Ishikura (Japan); V. J.
Madrid (Philippines); J. L. Morales (Philippines); S. J.
Navaratnam (Malaya); Saksiri Kirtpredi (Thailand); Sie Oensiang
(Indonesia); T. H. Williams (United Kingdom).

Sub-Committee to consider the Program of the Committee: T. H. Harrison
(Australia), Chairman; J. Barrau (South Pacific Commission); B. S.
Castillo (Philippines); S. M. Gendana (Philippines); Kahn
Jalevicharana (Thailand); F. T. Orillo (Philippines); J. M. Rose
(U.S.A.).

Apology

The Royal Lao Government expressed its regret at being unable
to send a delegate to the meeting but indicated its desire to partici-
pate in the next meeting of the Committee.

PRESENT STATUS OF THE PLANT PROTECTION AGREEMENT ..

Since the Third Meeting of the Committee held in December 1959, the Government of Laos has ratified its signature and the Government of the Republic of the Philippines has deposited its instrument of adherence. The present status of the Agreement is given below:

<u>Country</u>	<u>Date of Signature</u>	<u>Date of Ratification</u>	<u>Date of Adherence</u>
Australia	27 February 1956	Not required	
Ceylon	27 February 1956	Not required	
United Kingdom	29 March 1956	3 December 1956	
Laos	25 May 1956	17 March 1960	
Netherlands	25 June 1956	19 July 1957	
*Indonesia	28 June 1956		
Portugal	2 July 1956	5 September 1957	
Viet-Nam	2 July 1956	Not required	
India	2 July 1956	Not required	
Thailand	-	-	26 November 1956
France	-	-	20 August 1957
Malaya	-	-	20 November 1957
Pakistan	-	-	8 January 1958
Burma	-	-	4 November 1959
Philippines	-	-	11 June 1962

*Signature subject to ratification

The Agreement entered into force on 2 July 1956 in accordance with the provisions of Article XI.

At the time of the Fourth Meeting of the Committee, the following fourteen governments had therefore become parties to the Agreement: Australia, Burma, Ceylon, France, India, Laos, Malaya, the Netherlands, Pakistan, Philippines, Portugal, Thailand, United Kingdom, Viet-Nam.

The Committee received with gratification the report that Laos and the Philippines had become participants in the Committee.

PLANT QUARANTINE ACTIVITIES OF GOVERNMENTS

The following report covers the period since December 1959, when the Third Meeting of the Committee was held.

Australia

Territory of Papua and New Guinea. Legislative provisions in the Territory, the Quarantine Ordinances 1953 and Quarantine (Plants) Regulations 1956, continue to give full power to implement the quarantine aspects of the Agreement. The legislative provisions are fully implemented. All plant material and other goods of interest in plant quarantine work entering the Territory are inspected at the ports or in ports of entry. Cezetted Inspectors operate at these ports and treatment (where required) is carried out by qualified personnel.

Following reports of the discovery at Hanokwari in West New Guinea of the coffee bean borer, Cryphurus (Stephanoderes) hampei, special quarantine measures were taken to ensure that no vegetative coffee material or unroasted coffee beans are imported into Papua and New Guinea from West New Guinea. Furthermore, C. hampei was declared a notifiable pest under the Plant Disease and Control Ordinance 1953. This legislative provision gives full power of control, including eradication of infected plants, should this pest make its appearance in Papua and New Guinea.

Indonesia

In August 1961 a regulation regarding the importation of certain plants and seeds into Indonesia was issued by the Minister of Agriculture. Under this regulation, a permit is required from the Minister of Agriculture for the importation of the following plants: Oryza spp., Hevea spp., Saccharum spp., Coffea spp., Vitrus spp., Jocos nucifera, Isomoea batatas, Lusa spp., Theobroma cacao, Manihot utilissima, Zea mays, Elaeis guineensis, Carica papaya, Lycoopersicon, Solanum tuberosum, Alcuriter Fordii. Entry is allowed only if the plants are accompanied by a certificate of health from the country of origin, and only through the following ports of entry: Djakarta, Tjirebon, Semarang, Surabaya, Palembang, Pangkalpinang, Tandjungpandan, Medan, Sabang, Padang, Pakenbaru, Tandjungpinang, Djambi, Pontianak, Bandjarmasin, Samarinda, Balikpapan, Lingses (Serakan), Manado, Bitung, Makasar, Singaraja, Kupang, Ambon.

Also a new regulation regarding export of certain plants and seeds came into force in August 1961. The export of plants and seeds of the following species requires the permission of the Minister of Agriculture: Nicotiana tabacum, Agave spp., Musa textilis, Coffea spp., Elaeis guineensis, Theobroma cacao, Saccharum officinarum, Hevea sp., Camellia spp., Lawsonia spp., Orchidaceae, Rafflesia spp., Urotalaris juncea, Eugenia carophyllata, Lyristia spp., Piper nigrum. Permits for export are only issued for scientific purposes on an exchange basis. Exported plants must be accompanied by a certificate of health and must be exported from one of 29 specified places.

Japan

Although Japan does not lie within the area covered by the Regional Plant Protection Agreement, the observer from Japan agreed, for the benefit of members of the Committee, to make a short statement on plant quarantine activities in that country. Plant quarantine, which was introduced in 1914, is carried out at four main stations, five branch stations and 21 sub-branch stations at major sea and air ports. There are at present about 200 plant quarantine officers and it is proposed that this number should soon be increased to 250. During 1961 a total of 14,143 consignments of plants and plant materials were imported and inspected, and 14,467 consignments were exported.

Despite the vigilance of the inspection service two new major pests have gained entry into Japan, the potato tuber moth (Gnorimoschema operculella) which also causes severe damage to tobacco, and the fall web-worm (Hyphantria cunea).

Malaya

The only major change reported in the plant quarantine organization was in the legal aspect of the plant importation rules. These rules, although in use under an informal arrangement with the Customs Department, whereby the Department of Agriculture is able to stipulate the conditions of import on Import Licences, were published only in March 1961.

The work involved in plant quarantine is done by the Plant Pathology and Entomology Divisions of the Research Branch of the Department of Agriculture, in addition to their main duties of advising growers and investigating crop pest and disease problems. Except for two assistants, one at the plant quarantine station and the other at an entry point, there is as yet no specialized technical staff dealing exclusively with plant quarantine. The extension service of the Department bears the main burden of checking imports. Additional facilities for the fumigation of seeds have been provided in Kuala Lumpur and Penang.

Provision has been made in the present Five Year Plan for the creation of a separate plant quarantine service to be directed by a fully qualified officer. Also included in the plan is staff to carry out inspections and to supervise laboratory and fumigation facilities at the various entry points. Part of this plan has been executed, but further development, especially the recruitment of staff, has been halted pending parliamentary approval.

Philippines

The Republic of the Philippines reported no major changes in phytosanitary activities, legislation or organization. All existing plant quarantine laws, administrative orders, rules and regulations promulgated under them and the recommendations of the Committee are being vigorously implemented.

There was no outbreak of any new pest, disease or weed not previously known to occur in the Philippines. Cadang-cadang of coconut has, however, continued to spread despite every effort of control. Rice blast has been reported from time to time in different localities, particularly in the Bicol area. Tristeza disease of citrus, first reported in the island of Basilan in 1957, has now been found in all the principal citrus-growing provinces, and strict quarantine measures have been instituted.

Thailand

The number of plant species, which are subject to restrictions in their importation, has been increased from four to 18. The expanded list includes Oryza spp., Hevea spp., Strophanthus spp., Coffea spp., Citrus spp., Cocos nucifera, Ipomoea batatas, Musa spp., Anacardium occidentale, Manihot esculenta, Cassia spp., Zea mays, Blattia guineensis, Carica papaya, Solanum tuberosum, Nicotiana spp., Lycopersicon esculentum and Aleurites fordii. Since 1 September 1961, nine additional plant quarantine stations have been established, making a total of 14 such stations in various parts of the country.

The most important new record of a plant disease was the discovery in May 1962, of M1 disease of sugarcane in the southeastern districts of Rayong and Choburi. Urgent measures to eradicate the disease by roguing and burning of the diseased sugarcanes have been recommended. Steps necessary to enforce eradication are being considered by the responsible authorities.

United Kingdom

North Borneo. The staff of the Department of Agriculture which deals with plant quarantine is quite small and there is no specialized staff dealing solely with plant quarantine inspection for import and export. Such work is handled by the Plant Pathology and Entomology Sections of the Department. There are at present no facilities for fumigation but it is hoped that such facilities will become available in the near future, when a new agricultural research center will have been completed. Attached to this center will be a quarantine station; it is also hoped to provide fumigation facilities in Jesselton, to serve the airport and seaport. Imports of plants are at present controlled under the Plant Importation Rules, Laws of North Borneo 1953, as amended by Gazette Notification No. S45 of 1 April 1958. It is expected that revised rules will soon be published.

United States of America

At Clark Air Base in the Philippines there was until recently no control over plant imports. However, quarantine control has now been instituted in conformity with the plant quarantine laws and regulations of the Philippines. This control is operated under an arrangement whereby personnel of the base are enabled, through the cooperation of the Government of the Philippines, to deputize as plant quarantine inspectors. These inspectors are also empowered to deal with plant exports.

U.S. naval stations in the Philippines are operating a similar scheme and the Bureau of Plant Industry is assisting by training the necessary deputy inspectors.

South Pacific Commission Area

There is an active interest in plant quarantine in the various territories in the SPC area, most of which also come within the region covered by the Committee, and improvements in legislation are continually being made. One factor responsible for this increased activity is the expansion of air services between the territories. Another is the desire to halt the spread of the coconut rhinoceros beetle. The SPC Plant and Animal Conference of 1951 proved to be a stimulant to action, and the effect of its recommendations is reflected in the legislation of several territories. Also of use have been the reports of the meetings of this Committee. Territories within the Commission's area vary greatly in the importance and diversity of their agriculture, the establishments of technical staff, the frequency of shipping and aircraft arrivals, the number of declared ports and airports of entry, etc. Hence the importance and complexity of plant quarantine legislation and enforcement varies considerably. The territories are, however, similar in that they consist of island groups which are mostly separated from each other and from the continents by many miles of sea. This simplifies the exclusion of pests and diseases but, as some of the territories have very few technical or regulatory staff, they are at a disadvantage when attempting to implement plant quarantine measures.

REPORT OF THE STANDING TECHNICAL SUB-COMMITTEE

The FAO Regional Plant Protection Specialist, Mr. A. Johnston, has continued to serve as Secretary of the Standing Technical Sub-Committee, the functions of which, as drawn up by the second meeting of the Committee, concern mainly the provision of an information service for the benefit of participating governments. During the period under review, this has been provided mainly in three ways. Firstly, through quarterly reports in which outbreaks and spread of pests and diseases both inside and outside the Region, changes in plant quarantine legislation in the Region, and progress of research in the Region are recorded. Secondly, through the distribution of Information Reports (12 in number) which have dealt primarily with items of immediate interest such as new outbreaks of important pests and diseases and new plant quarantine regulations in the Region, notification of which it was undesirable to delay until the issue of a quarterly report. And, thirdly, through Technical Documents (17 have been distributed since the last meeting of the Committee), dealing mainly with country and regional lists of pests, diseases and weeds.

In connection with the work of the Committee, Mr. Johnston had made visits to several participating territories, including Ceylon, Fiji, India, Malaya, New Caledonia, New Guinea, New Hebrides, Singapore, Thailand and Vietnam. Other territories visited which were not at the time full participants in the Committee were Cambodia, Indonesia, Philippines and American and Western Samoa.

The Committee had recommended that, where necessary, country lists of pests and diseases should be compiled. Such lists had in certain cases been prepared. Preliminary surveys had been carried out in four territories and lists were compiled and circulated.

The work of the Secretary and the Sub-Committee was discussed and it was agreed that very useful contributions had been made in several directions. The stimulation given by the Sub-Committee to the compilation of information on pests and diseases in territories in the Region and the dissemination of this information to other territories was of particular importance. Only by the compilation and distribution of such data could sound quarantine legislation and effective operation of plant quarantine services be ensured.

The Committee expressed its satisfaction at the useful work done by the Secretary and stressed the importance of continuation and if possible expansion of the activities of the Secretary and the Sub-Committee.

GEOGRAPHIC COVERAGE OF THE AGREEMENT

At its Third Meeting, the Committee had considered a proposal presented by the Government of France that the area covered by the Agreement should be extended to include French Polynesia. At that meeting, the Committee did not reach any conclusion but recommended that FAO take steps to ensure the application of the same plant protection precautions provided in the Agreement to French Polynesia. The Director-General of FAO had accordingly suggested that until the Committee reached a decision on this point, and provided that French Polynesia in the meantime observed the provisions of the Agreement, the governments contracting to the Agreement might apply to French Polynesia the same measures governing the importation and exportation of plant materials as are in effect among participating governments. The FAO Council at its 34th session concurred with this suggestion.

Mr. Barat (France) outlined the views of his Government regarding extension of the Region to include French Polynesia. The Committee felt it highly desirable that the plant quarantine precautionary measures contemplated in the Agreement should be applied to this territory. It was however not considered advisable at the present juncture to extend geographic coverage to include French Polynesia, particularly in view of the present satisfactory arrangement whereby all contracting governments applied to this territory the provisions of the Agreement governing the importation and exportation of plant material amongst participating states. The Committee stressed the inadvisability of altering the Agreement at the present stage in the development of its activities and of the operation of the Agreement, and it was agreed that no amendment be recommended at present.

MEASURES FOR REGULATING IMPORTATION AND MOVEMENT OF PLANTS

After examining the various papers presented and in particular Information Letter No. 6, "Recommended Measures for Regulating the Importation and Movement of Plants" (summarizing the requirements of the Agreement and the previous recommendations of the Committee on this subject) the Committee made the recommendations given below.

1. No alteration should be made to the recommendations given in Information Letter No. 6 concerning the following plants:

Banana
Citrus
Coffee
Cotton
Potato
Rubber
Sugarcane
Sweet Potato
Taro

2. Modifications or additions as shown below should be made for certain other crops. Where reference is made to a "certificate of field inspection", this should be taken to signify a certificate from a competent authority in the exporting country that the material has been specially checked in the field and certified free from disease.

Cacao.

It is recommended that countries in the Region be permitted to import seeds, the testas of which have been removed, from countries where the "Swollen Shoot Virus Complex" is known to occur but in which Witches' Broom Disease does not occur, without intermediate quarantine outside the region and outside the area in which "Swollen Shoot Disease" occurs, provided that:

- (i) consignments are small and importation is made for scientific purposes.
- (ii) importation is made under the responsibility of the Department of Agriculture of the importing country.
- (iii) the phytosanitary certificate which accompanies each consignment, states that the seeds were collected from the pods of apparently healthy trees.
- (iv) there is efficient post-entry quarantine.

Coconut.

Resolution No. 7 of the First Meeting of the FAO Technical Working Party on Coconut Production, Protection and Processing¹, held in December 1961, concerns quarantine precautions for the import of coconut planting materials. This resolution amplifies the Committee's former recommendation on this matter and should, therefore be adopted as follows:

- a. No introductions should be made from areas where the following diseases or other diseases of obscure origin are known to occur:

<u>Disease</u>	<u>Known distribution</u>
Red ring (<u>Aphelenchoides</u> <u>cocophilus</u>)	Caribbean area
Lethal yellowing	Jamaica, Haiti, Florida
Kaincope disease	Ghana, Togoland
Cadang-cadang	Philippines
Bronze leaf wilt	British Guiana, West Indies
Root (wilt) disease	South India
Guam coconut disease (pre- viously reported as ca- dang-cadang)	Guam

- b. The above or similar diseases may also occur in other areas. Therefore in these other areas, the following precautions should be taken:

- i. Importation of coconut materials should be made only by official services, under permit, and only in small quantities, restricted to unsprouted nuts from which the perianth has been removed.
- ii. The seednuts should be accompanied by a certificate from an appropriate authority in the country of origin that the seeds come from trees showing no signs of disease.
- iii. Upon arrival the seeds should be fumigated or treated by any other method considered appropriate by the competent authorities of the importing country, to remove the risk of introducing insects.
- iv. The imported seednuts should be planted in individual containers in isolated quarantine for a period of one year. Any diseased seedlings, together with containers and planting medium, should be burnt.

¹1. Report of the First Meeting of the FAO Technical Working Party on Coconut Production, Protection and Processing. FAO, Rome, 1962.

Groundnut.

To prevent the introduction of groundnut rust (Puccinia arachidis), Sphaceloma arachidis and some pests, the importation of seedlings from the Americas, the West Indies, continental China and U.S.S.R. should be strictly prohibited. For scientific purposes, official services might, however, introduce small quantities of seedlings under strict post-entry quarantine and with the usual phytosanitary precautions. Seeds should be introduced only under permit and only if decorticated. They should be treated before export from the country of origin.

Maize.

Seedlings should be strictly prohibited and seeds should not be allowed from areas infected by Xanthomonas stewarti. Territories affected by X. stewarti include Canada, Mexico, Porto Rico, U.S.A., Italy, U.S.S.R.

Oil Palm.

The introduction of seedlings from outside the Region should be strictly prohibited. The introduction of seedlings from countries within the Region should be severely limited and done under strict quarantine control. Regarding seeds from Africa or America, only small quantities should be imported and these should be introduced by official services, should be treated, and should be accompanied by the usual phytosanitary certificate.

Pineapple.

To avoid the dissemination within the Region of the tomato spotted wilt virus and the introduction of some nematodes and dangerous pests, the right of importing pineapple vegetative materials should be limited to official services. In addition, when these materials originate in areas infected by tomato spotted wilt virus, they should be grown in isolated quarantine. In every case, the planting materials should be treated before shipment and after arrival to destroy nematodes and other pests. The materials should be accompanied by a certificate of field inspection as well as by the usual phytosanitary certificate.

Rice.

Some parasitic nematodes affecting rice are still unknown or are of limited distribution in the Region and may be transmissible by means of the seeds. This is also true of hoja blan-

ca. The nematode causing white tip (Aphelenchoides oryzae (bossevi)) is known from Japan, India, U.S.A. and Ceylon. Hoja blanca is known from Mexico, U.S.A., British Honduras, Cuba, Costa Rica, Guatemala, Panama, Salvador, Colombia, Surinam and Venezuela. The importation of rice seeds from these areas should be prohibited. Also, the importation of paddy for planting or consumption purposes should be prohibited. Small quantities of rice seeds might, however, be imported for scientific purposes by official services and under strict scientific control, including treatment and growing of one generation in isolated quarantine.

Tea.

Tea vegetative materials should be prohibited from any area where the disease caused by Xanthodidum reticulatum is known to occur (Japan) and from any country where phloem necrosis virus exists (Ceylon). Tea seeds should be imported only under permit and should be accompanied by the usual phytosanitary certificate as well as by a certificate of field inspection. In addition, they should be treated before departure and after arrival with appropriate fungicide and insecticide.

Tobacco.

The import of seedlings from any country in the world should be prohibited. Seeds should only be imported under permit and should be accompanied by the usual phytosanitary certificate, and a certificate of field inspection. Treatment of the seed should be by immersion for 15 minutes in a 0.1 percent solution of silver nitrate.

Soil and Rooted Plants.

Considering the great importance of nematodes as pathogenic agents, as predisposing factors of serious diseases and as virus vectors, and the importance of other soil-borne pathogens, the Committee again drew the attention of participating governments to the fact that importation of soil or any other unsterilized rooting media, such as compost, humus or forest litter, capable of carrying these pathogens, should be strictly prohibited.

For the same reasons, the importation of rooted plants should be limited to small quantities. Rooted plants should only be imported when there is no other means (e.g. unrooted cuttings, budwood, seeds) of introducing the required variety.

SPECIAL PLANT QUARANTINE PROBLEMS

Packing Materials of Plant Origin

The Committee considered the information presented on the use in the Region of plant materials as packing in international trade. It was noted that several territories have regulations in this respect but only in few cases is control complete. The Committee pointed out that unprocessed plant material is used, particularly in the territories in this Region, because it is inexpensive and easily available. Such materials could carry plant pests and diseases, as well human and animal diseases. Dangerous materials included rice straw and banana leaves. It was, however, apparent that certain unprocessed plant materials of plant origin would have to continue to be used in international trade and that it was not practicable at this stage to insist on the use of innocuous materials.

The Committee found itself unable at present to recommend any generally applicable measures to restrict the use of packing materials of plant origin. It however drew the attention of governments to the value of reducing the dangers inherent in importing such materials by enforcing a strict plant quarantine inspection system, whereby dangerous infected or infested materials could be intercepted on arrival and destroyed.

Measures for Preventing the Spread of Plant Parasitic Nematodes

Dr. A. V. Palo (the Philippines) introduced the subject briefly. The various methods by which plant parasitic nematodes might be disseminated were then reviewed. Of these the most dangerous were soil and rooted plants, although in certain specific instances (such as the red ring nematode of coconut and the nematodes causing white tip and ufra diseases of rice), the nematodes could be introduced with seeds and unrooted plant material. Various methods of preventing entry of nematodes were discussed, including -

- a) Prohibition of the importation of soil.
- b) Importation of rooted plants (which must be free of soil) only when unavoidable.
- c) Careful inspection of imported rooted plants and their compulsory retention in post-entry quarantine.
- d) Limitation of the quantity of nursery stock bulbs, etc., imported.
- e) Treatment of plant material by fumigation, hot water or chemicals.

The Committee recognized the importance of nematodes as agents causing damage to many crops and also was aware of the lack of knowledge of the plant parasitic nematodes present in the Region. Considering the vast size of the Region, comparatively few harmful species have so far been recorded from the territories covered. The need for surveys in the various territories was therefore stressed. Also emphasized was the need for the training of more nematologists to supplement the very limited number of such specialists at present working in the Region.

Plant Quarantine and the Exchange of Beneficial Insects

A paper prepared by Dr. V. P. Rao, Entomologist-in-Charge of the Indian Station of the Commonwealth Institute of Biological Control, was presented. Dr. Rao stressed the necessity for a continuing international exchange of beneficial insects, particularly parasites and predators of pests, and put forward suggestions regarding their safe and successful importation. The arrival in good condition of consignments of such insects could, he felt, be ensured if instructions were issued to expedite their passage through customs, quarantine and other formalities; if air transport companies could be requested to carry consignments in passenger cabins rather than in freight compartments; and if arrangements could be made for quick despatch and delivery of consignments sent by air mail. The importance of adequate post-entry quarantine was also stressed.

The Committee considered the paper presented by Dr. Rao as useful to all territories in the Region. After a review of the difficulties and problems faced by entomologists in the various parts of the Region in importing beneficial insects, it was agreed that the following points were of fundamental importance:

a) Adequate arrangements must be made by the importing agent with the quarantine authorities in the country of destination (and if necessary in countries where transit stops may occur) so that import permission may be obtained well in advance. The quarantine authorities should be kept fully advised of date and place of arrival, method of introduction, etc.

b) Full and detailed arrangements must be made with the transport organization (whether air carrier or shipping company) so that the whole journey is completed as expeditiously as possible.

c) The importing authority must ensure that it has adequate and safe facilities for the reception, post-entry quarantine, critical testing and ultimate safe release of imported insects.

It was considered that, if the above precepts were followed, it should be possible to import beneficial insects without undue losses

through mortality on the journey and without undue danger to the importing territory. The Committee therefore recommended that territories importing such insects should, whenever possible, follow the procedures outlined above.

Post-Entry Quarantine

In introducing the subject of post-entry quarantine, Mr. M. H. Barat, (France), called attention to the recommendations made in a paper by Dr. Sheffield². Mr. Barat emphasized the necessity for having a post-entry quarantine station situated near a research center where specialists in mycology, virology, entomology, nematology and other related disciplines would be available for consultation. Geographic isolation of a quarantine station is now considered to be of secondary importance. It is also necessary that the station should have easy access to an airport and the staff of the station should include a trained horticulturist so that imported plants may be grown under optimum conditions while under observation.

Methods of post-entry quarantine practised in different territories in and outside the Region were described and discussed by participants. They pointed out the difficulties in many, especially the smaller, territories of fulfilling the requirements outlined by Mr. Barat, mainly because of the few plant protection specialists available for consultation by officers of the plant quarantine station. It was considered that the difficulties might be resolved by the establishment of one or more regional or sub-regional quarantine stations to serve a number of territories. The Technical Secretary was therefore requested to investigate further the various practical possibilities for post-entry quarantine arrangements both from a territorial and a regional point of view.

Measures for Preventing the Introduction of Pests and Diseases on Plant Materials in Transit

Mr. Kahn Jalavicharana, (Thailand), differentiated between direct and indirect transit, adopting the definitions used by the European and Mediterranean Plant Protection Organisation, i.e., "direct transit" goods are those which pass through a country without clearance by Customs and when the plant protection services of that country have no responsibility in their regard, while "indirect transit" goods pass through the Customs of the transit country, are unpacked and sometimes stored before being reconsigned to another territory. Mr. Kahn emphasized the danger to the transit country which may arise from plants in direct transit, and over which the transit country may have no control. At the same time the difficulty of regulating or controlling such materials must be recognized, not only because of the inconvenience and delays which the

^{/2.} Sheffield, F. M. L. Requirements of a post-entry quarantine station. FAO Plant Prot. Bull. 6 (10): 149-152. 1958.

institution of controls might introduce, particularly as regards air traffic, but also because in many territories adequate staff, facilities and legislation are not available to allow handling of such materials.

The problems concerning plants in transit and the methods used to deal with them in various territories inside and outside the Region were discussed and the possibility of recommending general measures to be taken by participating governments was considered in detail. The Committee, realizing the complexity of these problems due to their impact on international trade, decided that they would need further careful examination before definite recommendations could be made.

Weeds

Dr. Harrison, (Australia), indicated the various ways in which weeds may be harmful to agriculture. One of the main methods of spread of weeds from one territory to another is as seeds contaminating consignments of pasture plant seeds; the spread of weeds could therefore be limited by the introduction of a system of seed inspection on import. Weed seeds may however be introduced in numerous other ways, for example, in consignments of commercial products such as wool or cotton. A further complication is that a plant which is regarded as a weed in one area may be looked upon as a useful plant in another.

The Committee gave detailed consideration to the danger of introduction into and spread within the Region of noxious weeds. It felt that each government or territorial administration within the Region should endeavor to define (or re-define) the weed situation and problems in its country or territory. Such definition (or re-definition) is of basic importance for the elaboration of plant quarantine policies in relation to noxious weeds at territorial, national or regional level, the present knowledge of the weed problems in some countries or territories being far from complete.

PUBLICITY AND THE EDUCATION OF TRAVELLERS

Dr. Harrison, (Australia), outlined the principles upon which an effective educational campaign in plant quarantine should be based if it is to achieve the objective of getting cooperation from the general public, especially those who travel, to prevent the introduction of pests and diseases to any country or region. He explained the way in which in Australia every medium is utilized to reach the people, and gave estimates of the costs for various types of publicity. Samples of literature, and colored posters were displayed and two colored films produced in Australia as part of the campaign, were shown. Since education or publicity is regarded as an essential part of plant quarantine administration, the cost involved is like a small insurance premium against serious losses from diseases and pests which the people can unwittingly introduce.

The Committee discussed the matter and decided to recommend that all participating governments explore ways and means of conducting a publicity campaign as an aid to plant protection in the Region. The Technical Secretary was requested to make inquiries in the main centers in the Region regarding printing costs of literature and materials best adapted to local needs.

PROGRAM OF THE COMMITTEE

The Committee reviewed its activities over the past five years. The Committee concluded that the activities of the Technical Secretary as outlined in his report to the Fourth Meeting have proved very profitable and acceptable to plant protection authorities of participating governments.

The Committee, therefore, recommended that in addition to the duties normally assigned to the Technical Secretary in his position as FAO Regional Plant Protection Specialist, and subject to any alterations to his program which he might find it necessary to make, the activities should be continued along the same general lines as in the past and particularly that the following services should be continued:

- a. Maintenance of an information service by issuance of quarterly reports and newsletters, containing information on such items as outbreaks and new records of pests and diseases in the Region, and changes in plant quarantine legislation in territories within the Region.
- b. Gathering and circulation of special information regarding major crops within the Region and specifically regarding techniques used in treatment for these crops.
- c. Visits to individual territories upon request, or for the purpose of gathering information relevant to inquiries into certain aspects of diseases or pests of any major crop in the area, and to develop and maintain contacts with those concerning plant protection operation and research.

Discussions and requests at the Fourth Meeting, indicated that the following matters should receive attention:

- (a) Distribution of working manuals on plant quarantine techniques to plant protection officers in the Region.
- (b) Collation and distribution of a list of major weeds in the area and threatening the Region.
- (c) Gathering and circulation of information on nematodes in the Region.
- (d) Survey of aircraft treatment procedures and examination of the "goods in transit" problem.
- (e) Circulation of a list of workers in the field of plant protection in the Region.

- (f) Revision and circulation of plant disease and pest lists affecting crops in the Region.
- (g) Assembling and preparation of abstracts for circulation, from all available technical reports or reprints. Indexing and classifying of these documents.
- (h) Gathering and circulation of information regarding biological control possibilities for major insect pests within the Region.
- (i) Collection and dissemination of information regarding the giant snail Achatina fulica and its control.
- (j) Obtaining and circulating information on the possibilities of having plant quarantine publicity posters, leaflets, etc., printed in the Region, and on the costs of production.
- (k) Summarizing and supplying to interested governments all available data on existing training facilities in plant quarantine in the territories in or adjacent to the Region.

The Committee decided that the Technical Standing Sub-Committee set up by the First Meeting should continue to function with a view to advising and assisting the Technical Secretary and ensuring continuity between meetings of the Committee. It was agreed that the size of the Sub-Committee should be reduced to facilitate its functioning. The following representatives of contracting governments were designated as its members:

E. E. Cruz (Philippines), Chairman
T. H. Harrison (Australia)
Kahn Jalavicharana (Thailand)

The Technical Secretary of the Committee will act as Secretary and Convener of the Sub-Committee.

GENERAL RECOMMENDATIONS

(Recommendations regarding regulatory measures required in plant quarantine enforcement are included under "Measures for Regulating Importation and Movement of Plants" and other sections.)

1. The Committee,

Recognizing that the services of the FAO Regional Plant Protection Specialist are indispensable to the implementation of the recommendations of the Committee,

Expressing its appreciation to FAO for continuing to provide the services of that officer,

Recommends that not only should those services be continued but, to cope with the greatly increased demands for service by participating governments, additional technical officers should be provided to the Region, so that the effectiveness of the work of the Committee may not be seriously handicapped.

2. The Committee,

Having considered the proposal made in 1959 by the French Government to extend the geographic coverage of the Agreement in order to include French Polynesia and the action taken by FAO on both this proposal and the recommendation made on the subject by the Committee at its Third Meeting,

Being informed of the resolution on the subject (No. 4/34) adopted by the FAO Council at its 34th Session in October 1960,

Being aware that French Polynesia is already observing the provisions of the Agreement,

Realizing the possible delay in the operation of the Agreement through the introduction of amendments,

Resolves that, at this stage, the amendment of the Agreement is not recommended and draws the attention of participating governments to the above-mentioned resolution of the FAO Council.

3. The Committee,

Being fully aware of the considerable economic importance of plant parasitic nematodes and of the danger of introducing such nematodes into new areas,

Realizing the difficulties of elaborating efficient quarantine measures in that connection in view of the present limited knowledge of the nematode fauna of the region,

Realizing further that there is a pressing need for intensified research work on nematodes, a need which can only be met by the training and employment of more specialists in the field,

Recommends that all participating governments or territorial administrations within the Region should endeavor to undertake in their respective countries or territories surveys of plant parasitic nematodes; and should, where these are not already available, train and secure the requisite specialists for such surveys.

4. The Committee,

Considering the importance of publicity as an aid to effective plant quarantine enforcement,

Recognizing that the great majority of people, both farmers and city dwellers, could appreciate the threat to their well-being from crop pests and diseases and therefore would cooperate in plant quarantine administration if adequately informed of the reasons for regulations in this field.

Regarding expenditure on publicity as a very cheap form of insurance against the introduction and spread of crop pests and diseases,

Recommends that governments undertake suitable publicity campaigns on plant quarantine in their respective countries or territories, and

Requests FAO to examine the possibilities of regional publicity campaigns covering quarantine aspects with regard to important crops, enlisting the cooperation of international airlines, shipping and other transport agencies.

5. The Committee,

Recognizing that one of the major functions of the Technical Secretary is the provision to participating governments of an information service,

Considering that such a service can only be adequately continued if the necessary technical documentation is made available to him,

Recommends that governments cooperate actively in this work by forwarding to the Technical Secretary all scientific publications, reprints and technical articles dealing with plant protection which are published in their respective territories.

6. The Committee,

Considering again the urgent necessity for adequate training, both basic and advanced, of plant quarantine personnel,

Concluding that such training is fundamental to the implementation of the recommendations made from time to time by the Committee,

Wishes to draw attention to the recommendation of its Second Meeting on this matter and

Recommends to the governments concerned that they should endeavor to provide more adequate facilities for basic training in this field in their respective countries or territories and give higher priority to the allocation of scholarships and fellowships in this subject granted by FAO and other agencies, and

Requests FAO to examine the possibilities of establishing, if requested by governments, sub-regional or regional plant quarantine training centers or courses and of assisting study-tours for advanced plant quarantine personnel.

7. The Committee,

Having examined, the resolutions made at the First Meeting of the FAO Technical Working Party on Coconut Production, Protection and Processing held in Trivandrum, India, in December 1961,

Considering that diseases of unknown origin affecting the coconut palm represent an extremely serious menace to the economy of a large part of the Region,

Recommends that every step be taken by FAO to promote, at world level, efficient coordination and cooperation in the research undertaken on these unknown diseases, and supports the views expressed by the above-mentioned Working Party in its Resolution No. 3 which

- (a) Requested the Director-General of FAO to investigate the possibility of appointing a consultant familiar with some of the diseases to:

- 1) Compile, tabulate and interpret existing information on these diseases;

- ii) Visit areas of occurrence of the diseases, making a detailed study of their symptoms,
 - iii) Make accurate comparative descriptions emphasizing the differential characteristics of these diseases, illustrated in color to facilitate their identification and determination.
- (b) Recommended that the results of these studies be published and circulated to interested countries,
 - (c) Suggested that the Director-General approach governments and organizations in an endeavor to find adequate sources of finance for this project.

8. The Committee,

Referring to Article II of the regional Plant Protection Agreement concerning the convening of meetings of the Committee,

Recommends that the Director-General of FAO, in consultation with the Chairman of the Committee, convene the Fifth Meeting of the Committee in 1964.

